

Figure 10 is a block diagram of a 4-bit ripple-carry adder. The circuit takes inputs A, B, C, and D, and a carry-in (CIN). It uses a 2-to-4 decoder (20-1) to generate four minterms (20-2, 20-3, 20-4). These minterms are combined with CIN in a 2-to-4 decoder (20-4) to produce the carry-out (COUT). The sum (SUM) and zero (Z1) outputs are generated by a 4-to-1 multiplexer (40) using the minterms and CIN.

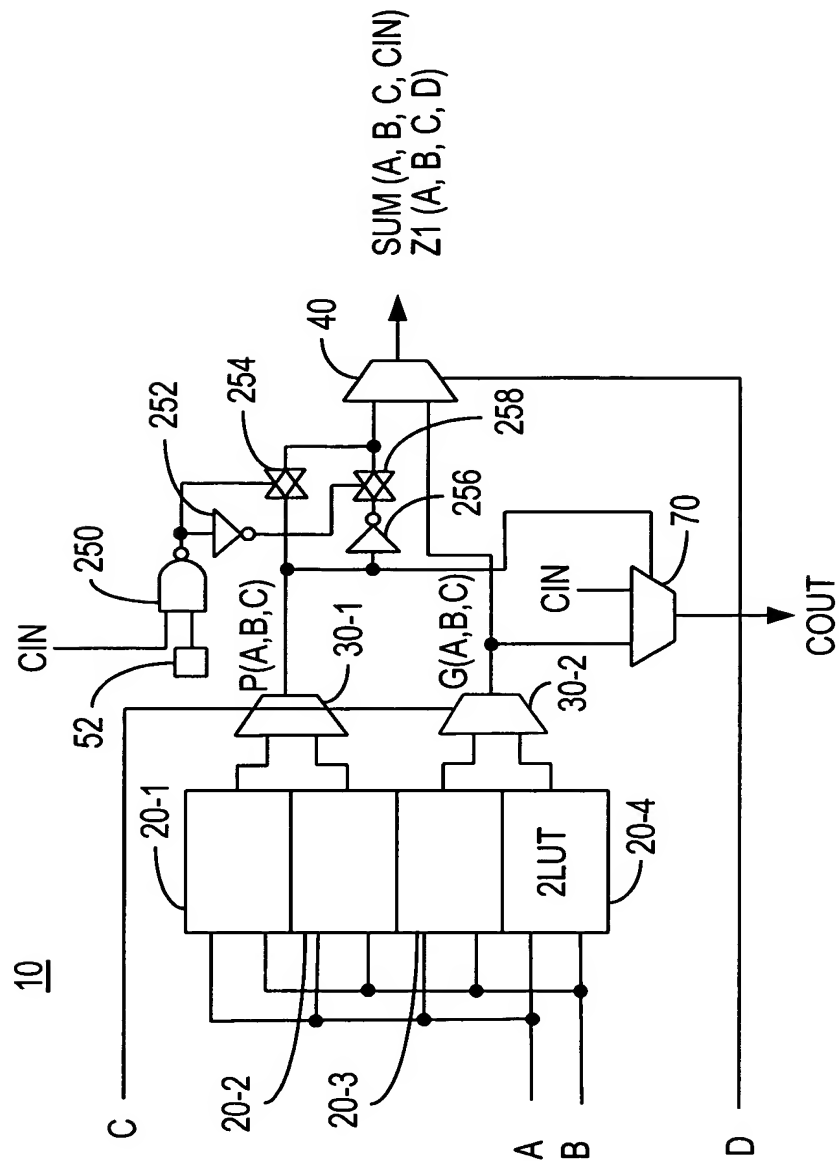


FIG. 2

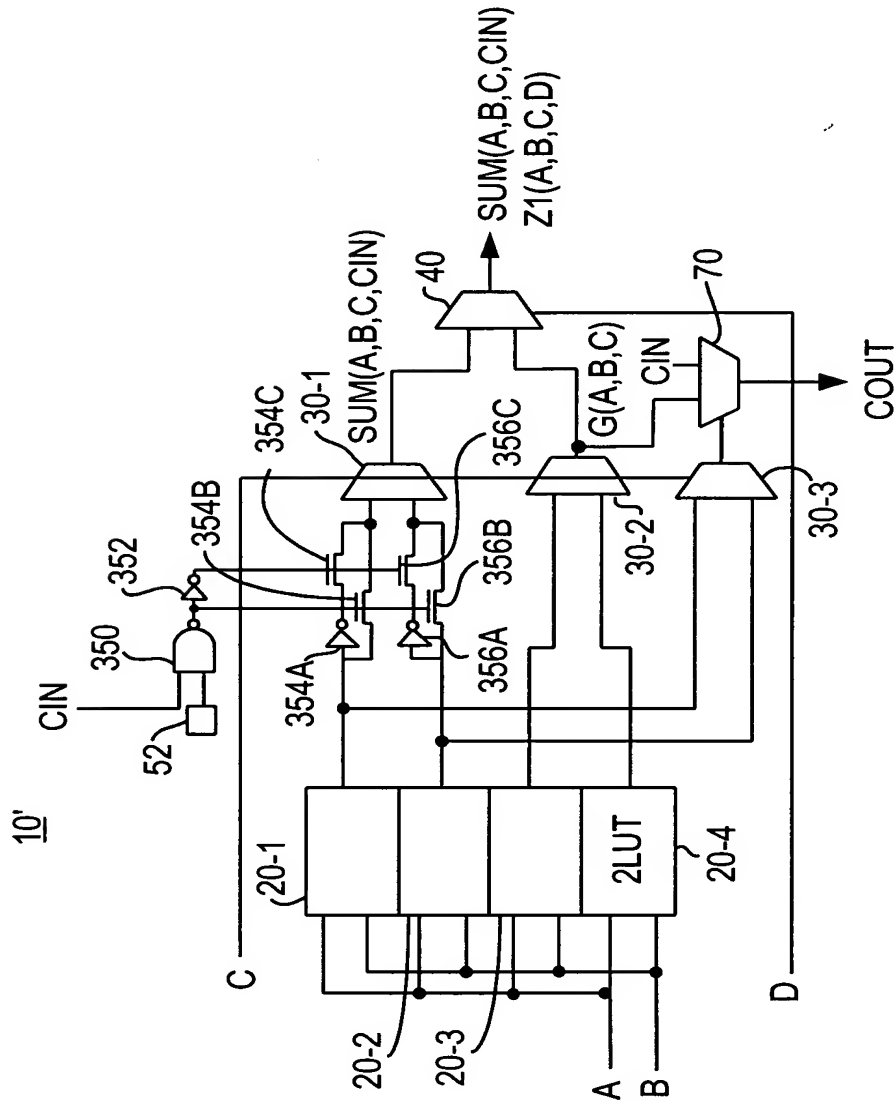
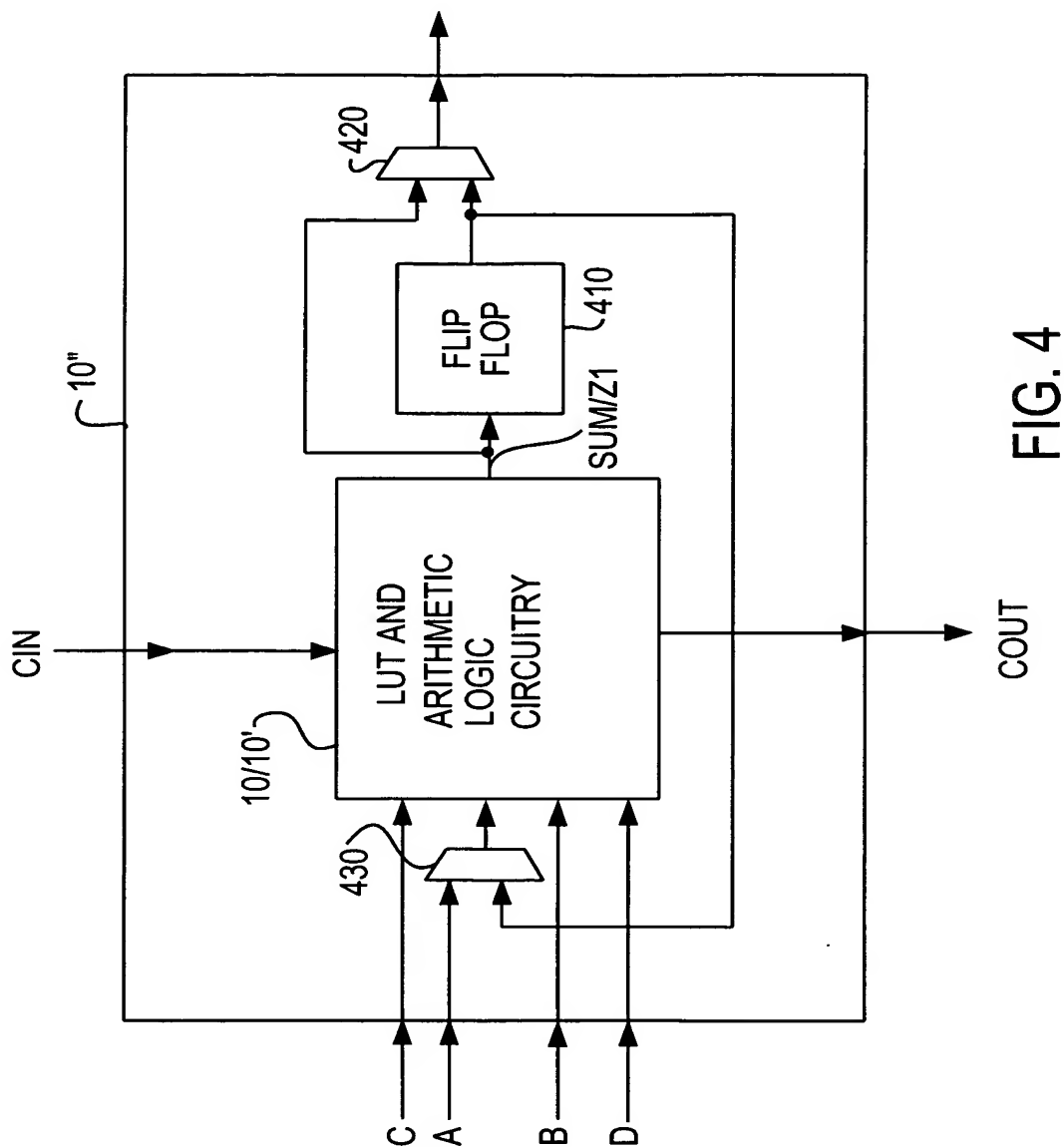


FIG. 3

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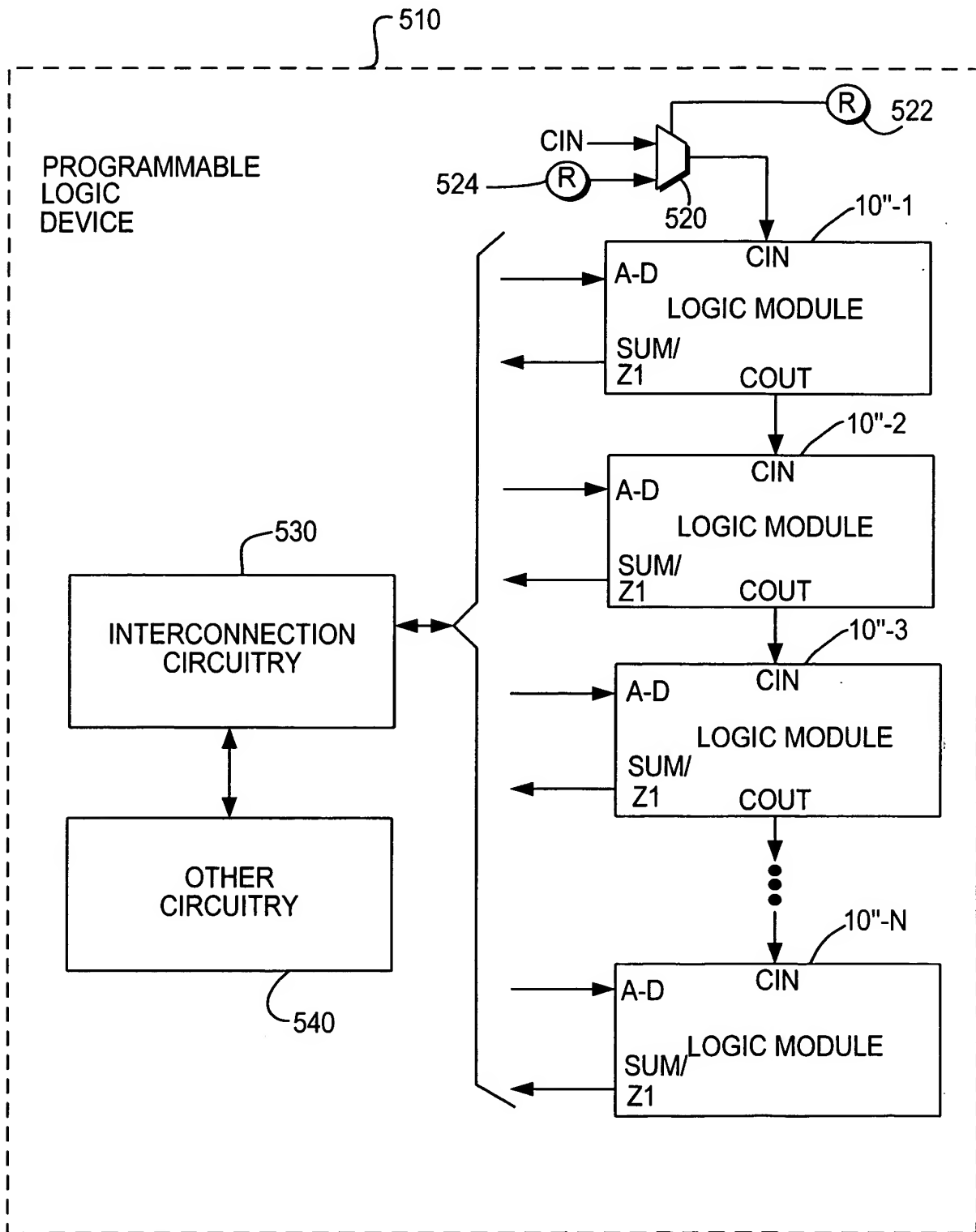


FIG.5

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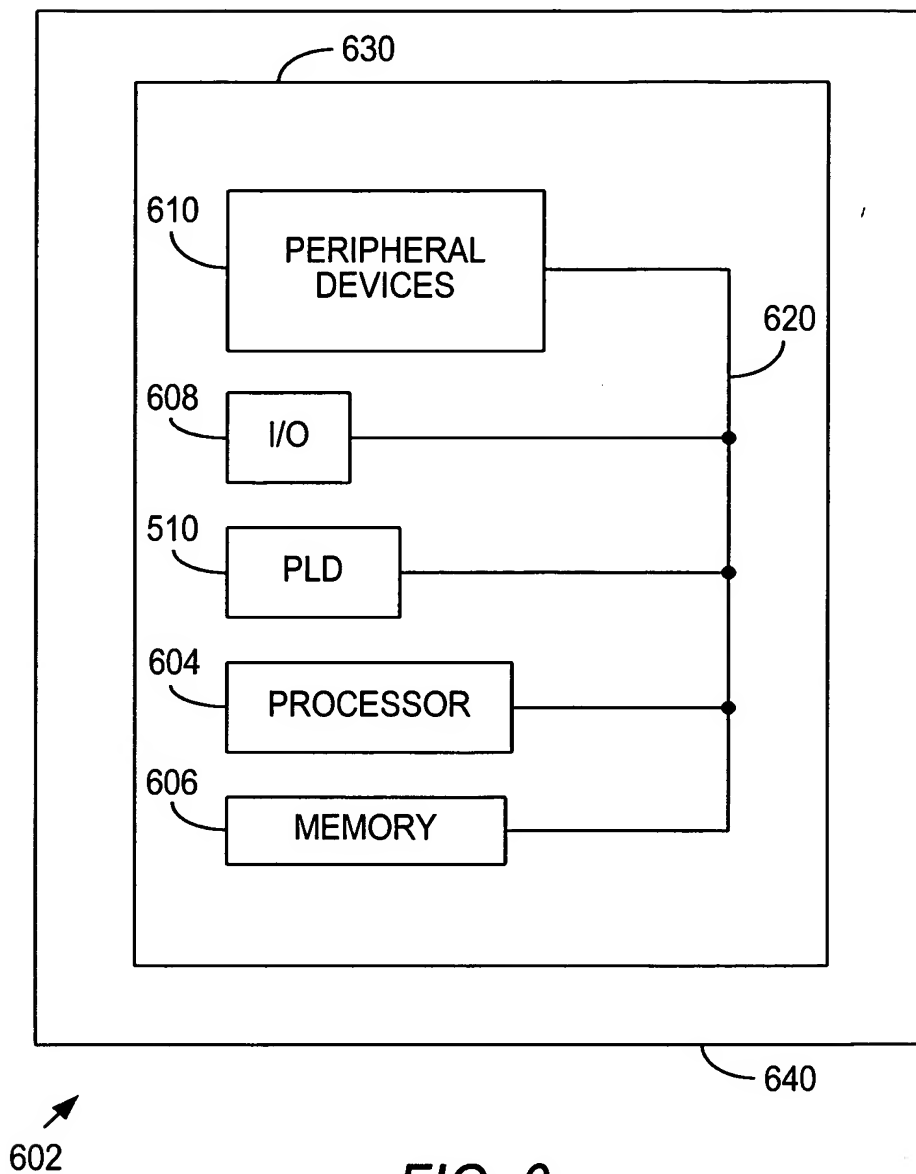


FIG. 6

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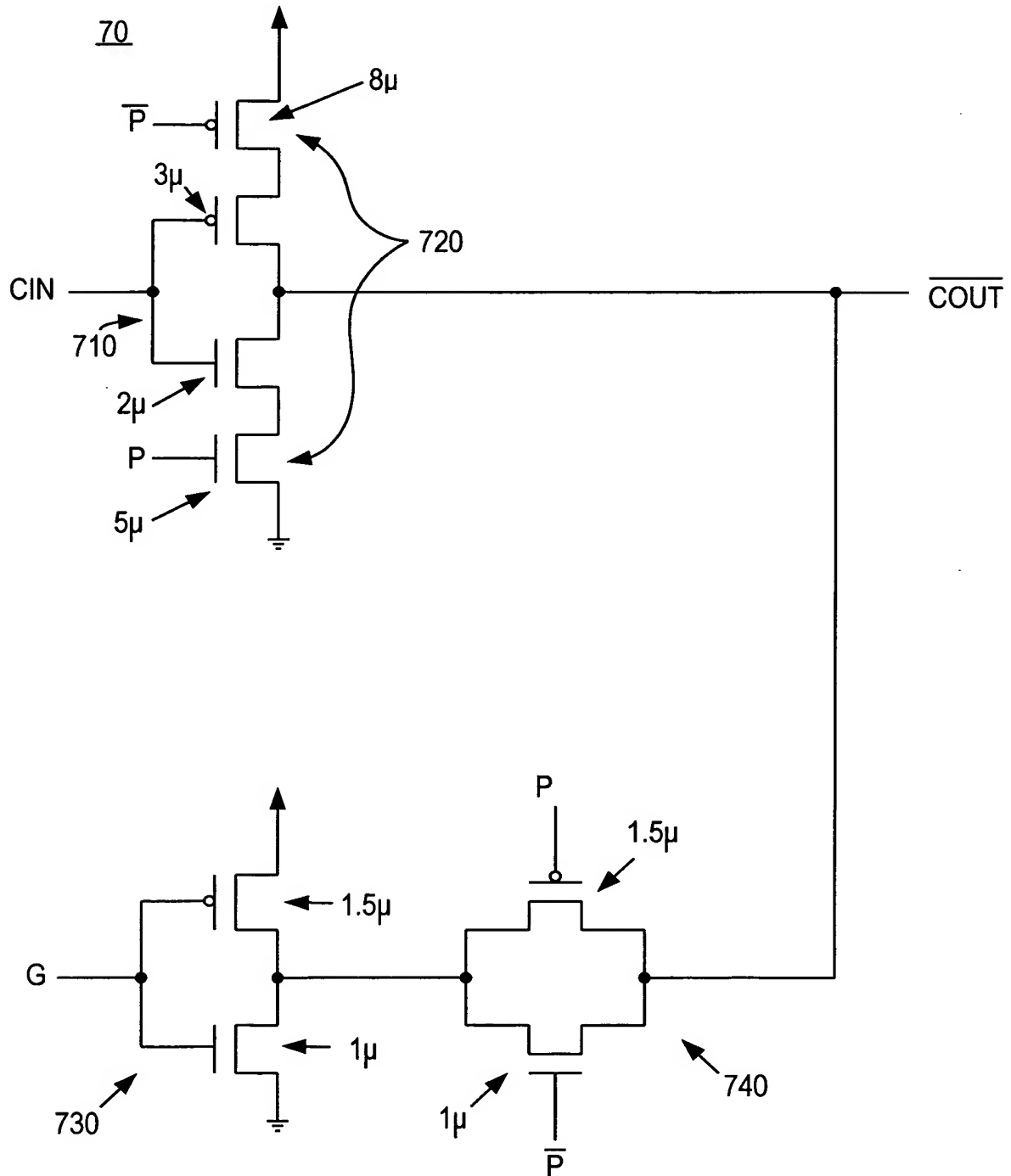


FIG. 7